## CLAIMS

1. An edge roller assembly, comprising:

a first grip ring; and

a second grip ring, the first and second grip rings being held together in an opposing relationship such that outer surfaces thereof define a groove for receiving an edge of a substrate.

2. The edge roller assembly of claim 1, wherein the first and second grip rings are O-rings.

3. The edge roller assembly of claim 1, wherein the first and second grip rings are comprised of a rubber material.

4. The edge roller assembly of claim 3, wherein the rubber material has a Shore A hardness in a range from about 40 to about 90.

5. The edge roller assembly of claim 3, wherein the rubber material is selected from the group consisting of VITON rubber, polyurethane rubber, EPDM rubber, and fluoropolymer rubber.

6. The edge roller assembly of claim 1, wherein the first and second grip rings are held together by opposing clamp plates configured to receive a drive shaft.

7. An edge roller assembly, comprising:

a lower clamp plate;

an upper clamp plate;

a first grip ring; and

a second grip ring, the first and second grip rings being disposed between the lower and upper clamp plates in an opposing relationship such that outer surfaces thereof define a groove for receiving an edge of a substrate, and the lower and upper clamp plates being adjustably fastened together so that the clamping forces the lower and upper clamp plates exert on the first and second grip rings can be controlled.

8. The edge roller assembly of claim 7, wherein the lower clamp plate is a ring having a surface for receiving the first grip ring and a plurality of holes configured to receive a screw head.

9. The edge roller assembly of claim 7, wherein the upper clamp plate includes a surface for receiving the second grip ring, a central throughhole for receiving a drive shaft, a plurality of threaded holes, and a plurality of fingers extending from an upper surface thereof.

10. The edge roller assembly of claim 9, further comprising:

a height adjustment knob rotatably disposed on the fingers extending from the upper surface of the upper clamp plate, the height adjustment knob having a threaded hole formed therein for receiving a threaded portion of the drive shaft.

11. The edge roller assembly of claim 7, wherein the first and second grip rings are O-rings comprised of a rubber material.

12. The edge roller assembly of claim 11, wherein the rubber material has a Shore A hardness in a range from about 40 to about 90.

13. The edge roller assembly of claim 12, wherein the rubber material is selected from the group consisting of VITON rubber, polyurethane rubber, EPDM rubber, and fluoropolymer rubber.

14. The edge roller assembly of claim 10, wherein the lower clamp plate, the upper clamp plate, and the height adjustment knob are comprised of polyethylene terephthalate.

15. A method for contacting an edge of a substrate, comprising:

clamping a pair of grip rings together in an opposing relationship such that outer surfaces thereof define a groove;

inserting an edge of a substrate into the groove.

16. The method of claim 15, wherein the pair of grip rings is clamped together with a controlled force.

17. The method of claim 15, wherein the grip rings are O-rings.

18. The method of claim 15, wherein the substrate is a semiconductor wafer.

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19. A transport system for transporting semiconductor wafers to a wafer processing station, comprising:

a pair of edge roller assemblies disposed in an opposing relationship, each of the pair of edge roller assemblies including first and second grip rings held together in an opposing relationship such that outer surfaces thereof define a groove for receiving an edge of a wafer, and each of the pair of edge roller assemblies being disposed on a rotatable drive shaft.

20. The transport system of claim 19, wherein the first and second grip rings are O-rings.